ABSTRACT OF THE DISCLOSURE

A simulator is provided which can simulate in consideration of various parameters in a CMP process. A pattern density two-dimensional distribution calculating part takes a pattern density two-dimensional distribution image. A mesh adjusting part performs a mesh adjustment of a measured data. A height distribution calculating part calculates a height distribution based on the pattern density two-dimensional distribution image. A correlation coefficient calculating part calculates a correlation coefficient by performing a least squares analysis of a measured data and a height distribution data. Passing through a Fourier calculation part, spatial filter part, and reverse Fourier calculating part, the pattern density two-dimensional distribution image becomes a pattern density two-dimensional distribution image. This distribution image further passes through a height distribution calculating part, resulting in a height distribution data. The correlation coefficient calculating part calculates a correlation coefficient by performing a least squares analysis of the height distribution data and measured data after CMP process.